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Creativity in conscious and unconscious thought condition in Iranian population

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Abstract

The aim of the study was to shed more light on the process of unconscious thought. To do this, unconscious thought will be compared to conscious thought, according to the unconscious and conscious thought theory. The comparison will be made with tasks that relate to creativity. 90 students were randomly assigned to one of three conditions: an immediate generation, a conscious thought, and an unconscious thought condition. Participants were asked to list things one can do with a brick. There was differentiation between immediate group with other groups. The result is not congruent with previous researches and next studies should explain this discrepancy.

Keywords: Conscious thinking, Unconscious thinking, Divergent thinking, Creativity, students.

1. Introduction

The phrase "unconscious thought" may raise eyebrows in the present context. In the past several decades, unconscious have been rediscovered in the domain of experimental psychology [1]. Human beings make sense of a situation in two different ways. The first is the conscious approach. They think about what they have learned, and eventually come up with an answer. This strategy is logical and deliberate. The second strategy does not weigh all the evidence. It considers only what can be gathered at a glance. Recall the old proverb, "First impression is the best impression". The part of our brain that leaps to conclusions at a glance is called the adaptive unconscious [2]. In other words Unconscious thought is defined as "cognitive and/ or affective task-relevant processes that take place outside conscious awareness" [3]. Come to think of it, this ability has played a significant role in the shaping of human civilization. Human beings have survived as a species for so long because they have developed the capability to make very quick judgments based on very little information" [2].

Dijksterhuis showed that unconscious thoughts somehow organize information more effectively than conscious thinking [3]. In a series of studies, Dijksterhuis and colleagues [3,4,5,6,7,8] established the surprising and counterintuitive finding about conscious and unconscious thoughts in different statuses such as decision-making, post choice satisfaction and creativity. They showed in their findings that unconscious thought leads to better outcome in each status.

Acker [9] replicated one of Dijksterhuis's studies that was published 1n 2006 about decision-making. His results indicated that unconscious thought does not necessarily lead to better normative decision making

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performance than conscious thought, which is contrary to the results found in Dijksterhuis et al [4]. In this study we tried to replicating one examination of other studies that Dijksterhuis and colleagues published in 2006 about investigating Creativity in conscious and unconscious thought condition in an Iranian population.

2. **Method**

2.1. *Participants and Design*

Ninety undergraduate students from the Shahid Behshtei University and University of Tehran participated in the experiment. They were randomly allocated to one of three conditions: an immediate generation condition, a conscious thought condition, and an unconscious thought condition.

2.2. *Procedure and Materials*

In the instruction, Participants were asked to list things one can do with a brick. No examples were given and participants were given one minute to list their thoughts.

After participants read the instructions, they were randomly allocated to one of three conditions by the computer program. In the immediate generation condition, they were immediately asked to list things one can do with a brick. They were given one minute to complete this task. In the conscious thought condition, participants were given three minutes to think about the list before they were given one minute to list things one can do with a brick. In the unconscious thought condition, participants were told that they would be asked to generate things one can do with a brick sometime later, but that they would first do another task. These participants were distracted for three minutes before they were given the one minute to list the pasta names. The goal of the distracter task used in the unconscious thought condition was to occupy conscious attention of the participants. The task was answering to the some questions of a Reivene IQ test in 3 minutes.

2.4. Data analysis

Data were analyzed by SPSS-16. For investigation of differences between groups multivariate analysis variance test was done.

3. **Results**

For all participants, the numbers of things one can do with a brick listed were counted. All listed items were scored on creativity by two independent judges who were blind to the purpose of the experiment. They used 7-point scale ranging from 1 (not at all creative) to 7 (very creative). Their judgment showed a high correlation (.90) and was significant at 0.01 levels. Descriptive statistics of things and creativity is shown in table 1.

Table 1. Mean number of items listed and average creativity of the items listed per condition (standard deviations are given between parenthese)

	Immediate	**Conscious thought**	**Unconscious thought**
Number	3.07(1.34)	4.30(1.60)	4.167(1.18)
Creativity	5.87(3.23)	7.28(2.98)	7.15(3.43)

Multivariate test indicated a significant multivariate main effect for groups (Wilks' Lambda = .84, F = 3.83, df = 86,172, p = .0005). Tests of between-subject effects showed that in the number of item there is significant difference between groups (F= 7.19, df= 2, p=.001) according to scheffe test this difference between conscious and unconscious groups was not significant (p= .93), between conscious and immediate groups was significant (p= .004) and between unconscious and immediate groups was significant also (p=.01). Tests of between-subject effects showed that in the average creativity of the items listed per condition there is no significant difference between groups (F= 1.78, df= 2, p=.18).

4. **Discussion**

The results of the present experiments showed that despite conscious thought and unconscious thought are different modes of thought, didn't lead to different results. In other words there was no difference between conscious and unconscious thinking groups in the number of creative response. But there was differentiation between immediate group with other groups. The mean number of each group and average of creation showed the lowest level of creation in immediate group. It can be referred to lack of time for answering the question, relation to two other groups.

Our findings are not congruent with previous studies suggested that unconscious thought organize information more effectively. Immediate thinking uncovered remote associations between concepts in this study. This incongruence may be due to cultural differences in Iranian population. More studies are needed to clear this discrepancy in Iranian culture.

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